ROCOL®

Performance you can trust

Technical Data

Dry Moly Fluid

Resin bonded dry film coating of molybdenum disulphide

Description

ROCOL® Dry Moly Fluid provides a very high content molybdenum disulphide film. It is designed to lubricate sliding mechanisms such as plain bearings, pins, cams and slides where a wet lubricant cannot be tolerated.

Molybdenum disulphide (MoS2) is a great lubricator and very resistant to high loads.

Also available in as an aerosol – see Dry Moly Spray
And in paste form – see Dry Moly Paste.

Applications

- Plain Bearings
- Slides / Sliding mechanisms
- Screws
- Pins
- Cams
- Chains
- Fasteners / bolting arrangements
- Splines
- Keyways
- Gearing

Approvals

NATO Stock numbers – 9150992826734
NAVAL Catalogue number - 4752826734

Features & Benefits

- Outstanding wide temperature range -50°C to +450°C
- Dry Film lubricant – resists pick up of contaminants such as dust and debris etc
- Prevents pick up and
- Excellent wear resistance
- Resists high loads
- Eases dismantling of assemblies
- Improves co-efficient of friction, see page 3 for details.

Directions For Use

Storage temperature should be kept below 50°C and kept out of direct sunlight.

Shelf life is 2 years from date of manufacture.

Dip, spray or brush application.

Ensure surfaces to be treated are clean, dry and free from oil, grease or dirt contamination.

Highly flammable product - use only in well ventilated areas and ensure there are no sources of ignition.

Keep Dry Moly Fluid well agitated.

Adhesion can be improved by heat curing, dry in oven at 80°C – 100°C for 30 mins and allow to cool, or cure for 3 hours at ambient (20°C).

The cured film can be improved by lightly burnishing with a lint free cloth.

Further Information

For pack sizes, part codes and safety data sheets please visit www.rocol.com or get in touch with our customer service team who will be happy to help: customer.service@rocol.com

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Property	Test Method	Result
Appearance	Visual	Thin blue-black applied film
Solids	N/A	Molybdenum disulphide
Binder	N/A	Organic resin
Solvent	N/A	Acetone/alcohol blend
Drying Times:		
Touch Dry	N/A	2-3 minutes
Full Cure at 20°C	N/A	Approximately 3 hours
Full Cure at 80°C – 100°C	N/A	30 mins in oven, then allow to cool
Temperature Range (applied film)	N/A	-50°C to +450°C
Approximate Coverage	N/A	8m^2/l
Resistance of Resin Bonding Agent in Applied Film	N/A	Soluble in hot oil and come common solvents

Values quoted above are typical and do not constitute a specification.

Issue 3 Date: 12/20

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Torque Settings of Fasteners

When a thread compound is applied to a fastener that will be torque tightened, the torque setting will require adjustment to achieve the correct tension in the fastener. Correct torque settings can be calculated using the methods below.

The following parameters were derived from the tension-torsion relationship measured on M12 x 50mm setscrews with 1.75mm thread pitch, full nut and Form A washers. Fasteners were degreased and a thin layer of thread compound applied in line with instructions on Page 1. Data are for fasteners at 90% of the yield stress:

Fastener Material	Coefficient of Friction (μ)	K-Factor
8.8 Steel Plain Finish	0.085	0.12
8.8 Steel BZP	0.109	0.15
8.8 Steel Hot Dip Galvanised	0.141	0.19
304 Stainless Steel	0.137	0.18
Aluminium 6061	0.121	0.16

$$T = F \times \left[(0.159 \times P) + (0.577 \times d \times \mu) + (D_f \times \frac{\mu}{2})\right]$$

T = *Torque Applied (Nm)*
F = *Tension Generated in Fastener (N)*
P = *Thread Pitch (m)*
d = *Pitch Diameter (m)*
D_f = *Nut Friction Diameter (m)*
μ = *Coefficient of Friction*

$$T = K \times F \times D$$

T = *Torque Applied (Nm)*
F = *Tension Generated in Fastener (N)*
D = *Nut Nominal Bolt Diameter (m)*
K = *K-Factor*

Many parameters affect the tension-torsion relationship of fasteners, including: Bolt geometry, surface finish, lubricant application method, joint material, torque application method, variation in fastener manufacture etc. Therefore, these parameters above are for guidance only, especially if a different material is used or if geometry is significantly different to M12. Any calculated values are a predictive tool and the final tension should be verified, especially in critical applications. These values do not constitute a specification.

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